Before the
Federal Communications Commission
Washington, D.C. 20554

TW Telecom Inc. Petition For Declaratory Ruling Regarding Direct IP-To-IP Interconnection Pursuant To Section 251(C)(2) Of The Communications Act	)))))	WC Docket No. 11-119

COMMENTS OF PUBLIC KNOWLEDGE
IN FAVOR OF GRANTING THE PETITION

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August 15, 2011

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INTRODUCTION

The Commission should grant TW Telecom's (TWTC) petition.

From a legal and policy perspective, TW Telecom (TWTC) is no different than any other telephone carrier. Whether a given service is "telecommunications" turns on the nature of the offer: what is it that a given provider holds itself out to do? The question has nothing to do with technology, facilities, or the competitive environment. Because, like other carriers, TWTC offers to the public "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received,"[1] TWTC's voice service—as well as similar services offered by other providers—is a Title II telecommunications service. Therefore, TWTC is entitled to technically feasible IP-based interconnection with incumbent local exchange carriers (LECs).[2]

Public Knowledge (PK) submits these comments to put TWTC's petition in a larger context. If the Commission does not grant TWTC's petition, it will hobble its ability to carry out one of its basic statutory directives: to make available "a rapid, efficient, Nation-wide and world-wide wire and radio communication service with adequate facilities at reasonable charges."[3] Unless it asserts its authority over *all* telecommunications carriers, the Commission will not be able to adequately handle interconnection disputes, ensure call quality, promote public safety, and otherwise ensure that Americans have access to essential communications facilities.

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[1] 47 U.S.C. § 153(43).
[2] *See* 47 U.S.C. 251(c).
[3] 47 U.S.C. § 151.

I. The Petition Shows Why the PSTN Must Be Upgraded, Not Retired

TWTC's petition is well-timed from a policy perspective. It shines light on an increasing problem with the telephone system: Some dominant carriers are not taking their obligations as common carriers seriously. According to representatives of rural telecommunications groups, there is a "nationwide epidemic" of call completion problems in rural America.[4] Incumbents are not providing competitive carriers with the services they need in order to compete in a timely manner.[5] Wireless carriers behave arbitrarily and inconsistently with respect to text messaging services (which are "telecommunications services" in the same way that phone calls are). Indeed, the trouble TWT faces in obtaining fair interconnection with dominant carriers is only one of many symptoms of a growing fracture in the telephone system.

Rather than acknowledging and addressing this problem some have sought to institutionalize it, calling for the public switched telephone network (PSTN) to be shut down. This evades the issue and seeks to recast ongoing, fundamental problems as symptoms of outdated regulation. This idea has become part of the atmosphere in telecommunications policy circles. For instance, the FCC's

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[4] Joan Engebretson, *Do Rural Markets Have a Call Completion Problem?*, TELECOMPETITOR, Mar. 16, 2011, http://www.telecompetitor.com/do-rural-markets-have-a-call-completion-problem.

[5] Valerie Brauckman Burgess, *Backlog Of Verizon Orders Cause Significant Installation Delays*, TELEWORKINGS, Jan. 13 2011, http://telecoworks.blogspot.com/2011/01/backlog-of-verizon-orders-cause.html.

Technology Advisory Council (TAC) recently recommended that the FCC choose a "date certain" for retiring the PSTN.[6]

The push to "retire" the PSTN can be read in two ways. The majority view is a simple engineering-driven idea. Certainly it makes sense to transition the PSTN from a TDM-based switched network to an IP-based packetized network, and to phase out regulations that encourage or require the continued use of obsolete technology.

The phrase "PSTN" is associated so strongly with legacy technologies that most commenters equate the two. But some parts of the communications industry have seized on this idea as a way of ridding themselves of common carrier and public interest obligations, which have no relation to any particular technology. Their focus is more on eliminating the "public" part of the PSTN, than the "switched" part. For example, AT&T puts "obligation-to-serve rules, and carrier-of-last-resort obligations"—technologically-neutral common carrier requirements—in the category of "legacy regulations" that "hinder[] [its] ability to make ... investments."[7] It looks forward to the day when intercarrier compensation regulation will "disappear,"[8] although it does not propose a mechanism that would prevent large carriers (such as AT&T) from exploiting their market power to extract arbitrarily high interconnection fees from other networks. To be sure, many regulatory

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[6] *See* Technology Advisory Council, *Status of Recommendations*, June 29, 2011, http://transition.fcc.gov/oet/tac/TACJune2011mtgfullpresentation.pdf (TAC Recommendations).

[7] AT&T, Comments On The Transition from the Legacy Circuit-Switched Network To Broadband, GN Docket No. 09-51, Dec. 21, 2009, http://fjallfoss.Fcc.Gov/ecfs/document/view?id=7020354032 (AT&T Comments), at 12.

[8] AT&T Comments at 21.

assumptions (such as ICC rates based on "minutes") make no sense in a packet-switched world. But this does not mean that the Commission should abandon time-tested regulatory goals, such as quality service, traffic nondiscrimination, and fair relationships between carriers. Rather, it should update its methods. To that end, it is noteworthy that one of AT&T's primary complaints—an alleged need to maintain two separate networks—would be obviated if the Commission grant's TWTC's petition and clarifies that carriers can provide Title II telephone service over an all-IP network.

A. The PSTN Has Enduring Value

The "PSTN" is not a technology—it's a cultural institution with social, business, regulatory, and technological dimensions. Like other pieces of basic infrastructure, its value lies with its ubiquity, predictability, and reliability.

The common carrier and interconnection requirements that attach to the PSTN ensure that anyone with a phone number can call anyone else with a phone number and be sure that the call will be completed. They ensure a baseline of call and service quality and hold carriers accountable for spotty and poor service. They allow customers and businesses to take their telephone numbers with them, from one carrier to another, from wired to wireless and vice versa. They ensure that dominant carriers with a large customer base cannot exploit their superior negotiating position to demand unreasonable payments from smaller carriers to interconnect with them.[9] And they allow for the phone system to be used for

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[9] *See* Public Knowledge and Benton Foundation, Comments on USF and ICC, WC Docket No. 10-90, April 18, 2011, http://fjallfoss.fcc.gov/ecfs/document/view?id=7021239438 (describing how

emergency communications: the 911 emergency calling number is essential to public safety.

These features of the PSTN have proved so valuable that it has been expanding—it's hardly on the verge of retirement. Every mobile phone has a phone number, and the phone number is used to send text messages as well as voice calls. Phone numbers are "premium" additions to over-the-top VoIP services like Skype. And the Internet has been used to make phone calls better and more convenient, not to make them obsolete: contact syncing, visual voicemail, and "one number ringing" services (such as Google Voice) serve to augment, not supplant, the role of the PSTN in communications. While most Internet-based communication services are controlled by single vendors, and let you communicate only with other users of those particular services, the PSTN is carrier- and vendor-neutral. (Email comes closest to being as universal as the PSTN—but email addresses, unlike phone numbers, cannot be ported from one service to another.)

B. TWTC's VoIP is a Telecommunications Service

The recent history of the FCC has been marked by continued debates over the proper regulatory classification of different communications services—in particular, whether a given service is a general purpose "telecommunications" service like telephony (or, in PK's view, broadband Internet access), or a more specialized "information service" like a website or voicemail system. Platoons of

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unregulated intercarrier payments result from carrier's relative bargaining position and not what technical role they play in the network, which tends to favor large carriers); *see also* Gregory Rose, *The Economics of Internet Interconnection: Insights from the Comcast-Level3 Peering Dispute*, March 28, 2011, http://fjallfoss.fcc.gov/ecfs/document/view?id=7021239439.

communications lawyers have spent countless man-hours making this a more complicated question than it should be. But in this case the answer is simple: telephone carriers like TWTC are the prototypical example of telecommunications carriers. Nothing in the law says that a voice carrier is "telecommunications" only if it uses a certain bundle of technologies. What determines whether a service is telecommunications is the nature of the offered service,[10] not the exact method used In this case, TWTC makes the same offer as every other voice carrier: To carry voice traffic indifferently from one point to another.

The fact that TWTC makes the same offer as other telecommunications carriers is, by itself, reason enough for the Commission to grant the petition. Either TWTC is telecommunications or no telephone carrier is.

1. *The Essence of Telecommunications is the Offer to Carry Information, Without Change, to a Destination of the User's Choosing*

The relevant factor in determining whether a particular service is telecommunications is *what the provider offers to do*. Any carrier that offers to carry information to a location of the user's choosing, without changing the form or content of the information, is doing telecommunications.[11] It does not matter whether a service is analog or digital, TDM-based or IP-based,[12] wired or wireless,

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[10] Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC, 525 F.2d 630, 644 (D.C. Cir. 1976) (NARUC) (A particular system is a common carrier by virtue of what it does).

[11] Telecommunications is "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. § 153(43).

[12] Furthermore, it is settled doctrine that a carrier does not lose its telecommunications status just because it deploys modern technology. *See* Computer II Final Decision, 77 F.C.C.2d 384, ¶ 94 ("It is clear that in defining a basic service in this manner, we are in no way restricting a carrier's ability to take

copper or fiber. It does not matter how many computers are involved,[13] or whether the provider owns its own facilities.[14] It does not matter whether the provider offers to carry voice, text, or data. All that matters is whether the service involves carrying information from one place to another without change. This is precisely what TWTC's voice service does: it carries the human voice from one party to another, without change. [15]

Voice traffic is plainly "telecommunications," and TWTC's voice service is a "telecommunications service." Following passage of the 1996 Telecommunications

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advantage of advancements in technology in designing its telecommunication network.")

[13] In fact, the Communications Act expressly states that Any advanced computing or routing equipment that is necessary for the "management, control, or operation" of a telecommunications service is considered to be part of that service. 47 U.S.C. 153(20). This prevents carriers from trying to work around antidiscrimination requirements by doing the discrimination in a more sophisticated way than, for example, physically blocking a communication.

[14] There is a correlation between physical infrastructure and telecommunications—providers of communications infrastructure often offer telecommunications over it, and all telecommunications travel over physical infrastructure. As the Stevens Report noted, providers that only offer end-user equipment and services and do not "transmit" any information themselves are not telecommunications providers. Report to Congress, CC Docket No. 96-45, Apr. 10, 1998, http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/fcc98067.pdf, at ¶ 86. But it would be a mistake to equate the two. A carrier may lease or resell another's facilities—the exact ownership arrangement does not matter. And as discussed *infra*, note 20, it is possible for an "over-the-top" service to be telecommunications in some instances.

[15] TWTC's original petition covers the issue of "net protocol conversion" well. It should be added that the original policy and legal rationales for this doctrine relate to information processing that changes the form or content of information *from a user's perspective*. *See* Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended, CC Docket No. 96-149, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 21905, ¶ 106 (1996) ("we have treated three categories of protocol processing services as basic services … because they result in no net protocol conversion **to the end-user**") (emphasis added). From a user's perspective, provided the information is "voice" on both ends of a call, no "conversion" has occurred.

Act, the Commission determined that Congress intended that the definition of "telecommunications service" follow the analysis set forth in *NARUC*.[16] Under this inquiry, the Commission looks to whether the provider offers "telecommunications" in an indifferent manner to the general public. This is precisely what TWTC does: it advertises generally available prices and does not "make individualized decisions, in particular cases, whether and on what terms to deal."[17] Therefore, TWTC satisfies the primary elements of the *NARUC* test with regard to serving the public indifferently. Since, as discussed above, voice service meets the definition of "telecommunications," TWTC's voice service is a "telecommunications service."

2. Voice is an Application, But Not "Just" Another Application

AT&T positions voice being "just another application" of a general-purpose network as a reason to do away with much common carrier regulation of voice.[18] But a telecommunications service may involve an "application" as well as "transmission." Indeed, at least as early as the Second Computer Inquiry, the Commission has recognized that voice is an application that is conceptually separate from transmission.[19] After all, the traditional telephone network is really a general-purpose analog communications system, capable of transmitting modulated digital data (via modems), analog graphics (via fax machines), and text (via telex). With IP technology it is easier than ever to offer transmission without voice and voice

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[16] *Virgin Islands Tel. Corp v. FCC*, 198 F.3d 921, 927 (D.C. Cir. 1999) (affirming Commission interpretation that proper analysis for definition of "telecommunications service" in 47 U.S.C. §153(46) applies *NARUC* analysis).
[17] *NARUC*, 525 F.2d at 641.
[18] AT&T Comments at 21.
[19] 77 F.C.C.2d 384, ¶ 94.

without transmission.[20] But this distinction between "application" and "transmission" has to do with engineering and not whether a service is legally telecommunications. A given "offer" may have transmission, application, and other elements.[21] But when the offer is of a voice service like TWTC's, it is telecommunications under the law.

II. The FCC Needs to Oversee the Transition to IP Which Means that All Telephone Service Providers Must Be Telecommunications Service

These "angels on the head of a pin" debates are really proxy fights over the scope of FCC authority: the FCC has broad discretion to regulate telecommunications services as common carriers under Title II of the Communications Act, while its authority over information services under Title I, while real, is more proscribed. It is more efficient for opponents of regulation to take away agency authority altogether, rather than to fight individual regulatory decisions as they arise.

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[20] A related issue is the proper regulatory status of "interconnected," over-the-top VoIP. While, like information services, interconnected VoIP relies on consumers to provide their own transmission capacity in the last mile (similarly to how eBay or OpenDNS rely on their customers to purchase Internet access), their most important feature is interconnection with telecommunications services. When a customer calls a phone number with his interconnected, over-the-top VoIP service, he is purchasing access to the PSTN from his interconnected VoIP provider. Interconnected VoIP is thus a telecommunications service: the offer is to carry voice communications from one place (the interconnected VoIP provider's facilities) to another (the other party). It differs from facilities-based VoIP only in that the customer is responsible for getting the communication into his home, using some other telecommunications provider's facilities. This analysis is in accord with the Stevens Report, which only concluded that the *ISP* is not a telecommunications provider when its users are making VoIP calls (leaving open the question of whether the VoIP provider is) and which did not address computer-to-phone calling. Stevens Report, ¶ 85 -93.

[21] *See* Comments of Public Knowledge, GC Docket No. 10-127, Jul. 15, 2010, http://fjallfoss.fcc.gov/ecfs/document/view?id=7020547140, at 14-19.

Opponents of regulation and advocates for incumbent communications companies often argue that common carrier designation is somehow suited only for analog networks and steam trains[22] (if anything) and that classifying any other service as common carriage or telecommunications will bring undesirable regulatory consequences. What these consequences are, exactly, is never clearly articulated—because they cannot be. Title II gives the FCC the ability to decide whether certain practices are "unjust" or "unreasonable." It does not foreordain any decisions nor require any particular outcomes. For instance, the FCC might rightly determine that a particular practice is "unreasonable" in one set of circumstances but not in another, in certain market conditions but not in others, or for certain kinds of technology but not in others.

Title II does, however, give the Commission the tools it needs to oversee the upgrade of TDM-based networks to IP, and the leeway to gradually update its regulations to reflect a packet-based reality. For example, the TAC recommends that the FCC continue to guarantee "[u]niversal access to reliable communications … by regulation" and to use regulation to "make available highly reliable communications for critical industries."[23] And the FCC's plan's to modernize regulations such as intercarrier compensation "so that it does not stand as a barrier to the broadband

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[22] Randolph J. May, Reject the Internet "Public Option," CBSNews, Feb 16, 2010, http://www.cbsnews.com/stories/2010/02/16/opinion/main6211508.shtml ("the same kind of regulation imposed on railroads in the 19th century and on Ma Bell last century is not suitable for 21st century high-speed Internet networks.")

[23] TAC Recommendations.

future"[24] stand on uncertain legal ground without the legal certainty afforded by Title II.

The first step toward reforming PSTN regulation is to allow carriers to upgrade their equipment without penalty. By granting TWTC's petition, the Commission will clarify that carriers can and do provide telecommunications services with any technology.

CONCLUSION

Because TWTC's service meets the legal definition of a Title II service, and because the Commission's authority over telecommunications is of enduring relevance, the Commission should grant TWTC's petition.

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[24] Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, WC Docket No. 10-90, Feb. 9, 2011, http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db0209/FCC-11-13A1.pdf, at ¶ 505.